

A METHOD FOR QUICKLY PRODUCING MADE-TO-ORDER PIZZA

BACKGROUND OF THE INVENTION

Despite the enormous popularity of pizza, which has
5 been demonstrated in many consumer polls, it has been left
out of the fast food drive through revolution. It is quite
likely that this is because, heretofore, there was no way
of filling an order for freshly baked pizza, bearing a real
time customer specified set of toppings, in a 1-4 minute
10 time frame. As a result, drive through lanes and counter
order and pick up restaurants have been dominated by
hamburgers, fried chicken and Mexican style food. There can
be little doubt that if pizza orders could be filled
quickly enough to make a drive through system practical, it
15 would be a commercial success.

Although the use of partially baked crusts and
impingement ovens is known in the pizza business, such use
has not resulted in the ability to fulfill orders in under
4 minutes. Also, although it is known to cook pizzas in
20 ultraviolet ovens, this has not resulted in order
fulfillment in under 4 minutes.

Accordingly, if pizza could be made-to-order in a 1-4
minute time frame, many commercial opportunities for the
sale of made-to-order pizza would result.

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SUMMARY

In a first separate aspect, the present invention is a
method of rapidly preparing a first pizza and a second
pizza, each bearing a unique set of toppings in accordance
30 with a first and second order respectively. First, sauce
and cheese are placed on a first and a second partially
baked crust, thereby creating a first and second pizza

blank respectively. Then a first order is received for pizza bearing a first set of toppings, which is placed onto the first pizza blank to form a first topped blank. The first topped blank is then placed into an oven. Also, a
5 second order is received for pizza bearing a second set of toppings, which is placed onto the second pizza blank to form a second topped blank. The second topped blank is placed into an oven. The first topped blank is permitted to remain in the oven for long enough to become a first cooked
10 pizza and the second topped blank is also permitted to remain in the oven for long enough to become a second cooked pizza after. Finally, the first cooked pizza is removed from the oven and, likewise, the second cooked pizza is removed from the oven.

15 In a second separate aspect, the present invention is a method of preparing and selling made-to-order pizza that starts with a set of partially baked crusts and a location for customers to place orders. Next, a set of pizza blanks are prepared from a subset of the set of partially baked
20 crusts by placing sauce and cheese on the subset of the set of partially baked crusts. Orders for pizza are received from the customers, each order including a specified set of toppings. In response to each order, the specified set of toppings is placed on the pizza blank to produce a toppings
25 bearing pizza blank. Each toppings bearing pizza blank is placed into an oven and permitted to remain in the oven for long enough to become a cooked pizza. Then each cooked pizza is removed from the oven and the cooked pizzas are delivered to the customers. Additionally, payments are
30 received from the customers in exchange for the cooked pizzas. The pizzas may be cut and boxed, although with individual sized pizzas, this may not be necessary.

In a third separate aspect, the present invention is a restaurant drive through lane, offering made-to-order pizza delivered within one to four minutes of receiving the order for the made-to-order pizza.

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

The secret to quickly fulfilling a pizza order lies in two elements: using a partially baked (par-baked) crust and preparing a number of crusts ahead of receiving an order by placing sauce and cheese on them. In addition, a rapid cook oven, such as an impingement oven or an ultraviolet oven, greatly facilitates the speedy production of made-to-order pizza.

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By fulfilling pizza orders quickly, a drive through lane at a pizza restaurant becomes truly practical. Traditionally, a drive through lane includes an outside menu board having a microphone and speaker pair so that a restaurant employee may take the customer's order. In addition a payment window is provided for receiving money from the customer and an order fulfillment window for delivering the food. For a small unit, or for off-peak hours, one or more windows may be unavailable. Ideally, there is a line of cars, so that it takes about 4 to 6 minutes for each car to get from the menu board to the order fulfillment window, thereby providing the workers with a brief amount of time to prepare the ordered food. In some instances, of course, there will not be a line of cars and the customer may have to wait for a brief period of time while his food is prepared.

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To practice the present invention, pizza crust is made in the traditional manner, cooked until it is about 50% to 90% of the way done. The par-baked crusts are delivered

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daily from a central bakery to a set of fast food/drive through pizza outlets. Alternatively, the crusts may be prepared at an individual fast food/drive through pizza outlet.

5 Referring to FIG. 1, a quantity of par-baked pizza crusts 10 may be delivered 12 before the start of the business day to a restaurant, and readied for use. An employee or group of employees could be assigned the task of accessing sauce and shredded cheese 14 and applying
10 these items to the par-baked crusts 16, to form "pizza blanks" in advance of customer orders. Accordingly, whenever a customer 18 places an order 20 a pizza blank. These blanks can be kept until they are no longer useable, due to a prospective deterioration in the end product or by
15 health regulations and then discarded if not used.

After a customer order is received a worker accesses a set of toppings 22, and places the customer specified set of toppings 24 onto the pizza blank.

20 After this the toppings blank is placed in an oven 26 and permitted to remain there until it becomes a cooked pizza 28. In one preferred embodiment an ultraviolet oven is used for cooking the pizza. This type of oven includes a top and bottom high intensity ultraviolet light source spaced about 25 cm (10 in) apart vertically. Such an oven
25 is particularly well adapted for cooking par-baked crusts, which tend to agglutinate when cooked in a microwave oven, yielding a doughy, undesirable crust. By using such an oven the total bake time can be reduced to less than two minutes, thereby permitting up to two minutes for the pre
30 and post bake preparation. Another type of oven that can be used in the process is an impingement oven, in which the pizza is placed on a conveyer belt that takes it between

two closely spaced electric heating elements. Also, a very hot ($> 260^{\circ}\text{C}$) convection oven could be used.

At this point the pizza is removed from the oven 30. The pizza may be an individual portion that does not need to be cut and may be simply wrapped in paper or placed sideways in a properly sized paper bag or other container and handed to the customer. Alternatively a standard 25 cm (10 inch) or 40.6 cm (16 in) pizza would be sliced and boxed prior to delivery to the customer. and delivered to a customer 32 in exchange for a payment 34.

In a preferred embodiment, a system for receiving orders and preparing made-to-order pizza is quite similar to what is found in many fast food burger restaurants today, offering both a drive through lane and a counter order system. The "sauce" mentioned frequently in this application would typically be a tomato sauce. Other sauces, such as pesto, could also be used. Also, various named combinations are offered on the menu board, such as "the works," which would be sausage, bell peppers, onions and olives, with tomato sauce and cheese assumed.

Each received order would be displayed in the kitchen on display terminal. The chef would take a recently pasted and cheesed crust, place the remainder of the toppings on it and place it in the rapid cook oven for from 1 to 2 minutes, depending on the exact order and the oven used. After this, the pizza would be removed from the oven, cut packaged and delivered to the customer, either at the counter, by a waiter taking it to the customer's table, or at the drive through order delivery window. Shortly before or after the delivery of the pizza to the customer, the charge would be collected.